A preprocedure time of less than 10 minutes for cataract surgery? Discharge in less than 10 minutes? It can be done. But it may take more staff.

Ambulatory surgery centers (ASCs) that had the shortest times for cataract procedures in a new benchmarking study also seemed to assign more personnel.

The 2 facilities with the fastest preprocedure times had “rather heavy staffing compared with the others,” says Naomi Kuznets, PhD, director of the Accreditation Association for Ambulatory Health Care (AAAHC) Institute for Quality Improvement, which performed the study.

The facility with the shortest time uses 3 RNs and 5 technicians in all phases of the procedure, while the facility in second place uses 3 RNs and 4 technicians.

In all, 71 facilities participated in the 2004 study, including 33 who participated the previous year. Four improved their total patient time in the facility by more than 20 minutes over 2003. Most participants (58%) were single-specialty centers, and the rest were multispecialty facilities. This is the fifth year the study has been conducted.

The shortest preprocedure time—9 minutes—was achieved by Castleman Surgery Center, a 2-OR single-specialty physician-owned facility in Southgate, Mich. Eleven surgeons perform about 2,500 cataract procedures a year.

For discharge, the Eye Surgery Center of Western Ohio in Lima, had the second shortest time. The center has 2 ORs, 4 surgeons who perform cataract procedures, and an annual cataract volume of about 2,400 cases.

Keeping preprocedure time short
Several practices that make a difference in Castleman’s preprocedure time:
• adequate staffing
• customized paperwork for each surgeon
• timely administration of eye drops.

Staffing for cataracts
Castleman assigns 3 RNs and 5 technicians for cataract surgery; most are cross-trained and work in all 3 phases of the procedure.

“Physically, our preoperative and postoperative areas are very close to each other,” explains Donna Henderson, RN, the director of surgical services. “We have an RN in the preop and postop areas and in the OR. We also have a tech in each area.”

On days when the fastest surgeons operate, an additional tech is assigned to move back and forth between the pre- and postop areas. Henderson serves as 1 of the RNs. Three of the techs are medical assistants; the other 2 are surgical technologists (STs) who scrub for the cases.

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<th>Cataract surgery benchmarks</th>
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<td>Procedure times</td>
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Standardization
• More than two-thirds said they had standardized instrumentation for all of their cataract surgeons.
• 30 of 71 had standardized the intraocular lens brand for all surgeons.
• 59 of 71 use multidose eyedrops; 29 mixed the drops themselves.

Source: AAAHC Institute, 2005.
To maximize its efficiency, Castleman uses 2 ORs for 1 surgeon. While the surgeon is operating in the first room, an ST and medical assistant are preparing the second room. When the surgeon finishes, he and the RN can go directly to the second room. The first room is then prepared for the next patient. Using 2 ORs, the fastest surgeons can perform 5 cases in an hour. The average is 3.5 to 4 cases an hour. At another top performer, the Eye Surgery Center of Western Ohio, the fastest surgeon can perform 8 cases an hour, with the average for all surgeons at 3.5 to 4 cases an hour.

This arrangement “is more cost-effective than staffing both rooms with an entire staff,” says Linda Phillips, RN, Castleman’s administrator. Most of the staff is contingent, meaning that they go home when surgery is completed.

“Our staff has been with us for years, and we don’t have frequent turnover,” she adds. “They are astute at being efficient without compromising the quality of care.”

**Custom paperwork**

Paperwork is customized for each surgeon.

“For every surgeon, we have the preop and postop paperwork—what dilating drops they are using, what postop drops the patient will be on, and the local anesthetic they use,” Phillips says. “Most of our charting is minimized to check boxes and initials, rather than a lot of handwriting. All you have to do when you put in a drop is to put in the time and initial.”

Customized paperwork for 11 surgeons may sound overwhelming but is actually simple, she notes. The paperwork is kept in stacked bins, each labeled with a surgeon’s name. Charts are made up by a surgical coordinator. When a case is scheduled, she takes the surgeon’s paperwork and places it in the chart.

Henderson contacts each surgeon’s office every 6 months to verify that the orders are still current.

**Timely administration of eye drops**

Preoperative preparation begins as soon as the patient arrives for surgery. Patients typically arrive 30 minutes before they are scheduled to go to the OR. The receptionist greets the patient and pushes a button at the front desk that lights up in the preop area to signal the staff. A staff member immediately goes out to meet the patient and verifies that the surgical consent form has been signed. The staff member takes the patient to the preop area to start the process.

**Other efficient practices**

Some practices that helped other best performers keep preprocedure time short were:

• adjusting patients’ arrival times for faster and slower surgeons
• performing cataract surgery on dedicated days of the week
• using compound eye drops that achieve pupil dilation in 15 minutes.

When patients arrive seems to influence the time, Kuznets notes. Patients who arrive very early may contribute to a longer average preprocedure time, the 2003 study found. She suggested that organizations compare their average preprocedure time with their instructions for patient arrival to see if the arrival time they are recommending is appropriate.

**Timely discharge**

Minimal sedation and carefully planned patient instruction help facilities prepare patients for discharge efficiently.

The shortest discharge time was under 10 minutes, and the average was 21 minutes.

At the Eye Center of Western Ohio, which discharges its patients in under 10 minutes, patients receive primarily topical anesthesia and 1 to 2 mg of Versed for sedation.

“When patients come out of the OR, we take 1 set of vital signs,” says the center’s nursing director, Diane Repko, RN. If the vital signs are similar to the baseline on admission, the patient’s IV is discontinued and the patient is prepared for discharge.
During this process, discharge instructions are reviewed. Patients have already received instructions on their eye drops preoperatively and are instructed to use their drops for 2 days before surgery to assess their compliance.

As is common, patients leave their street clothes on and are transported on the same stretcher throughout the process.

Minimal sedation is an important factor, Kuznets comments. “We see that repeatedly in the reports we do. The patient’s time in the facility is affected by how much anesthetic is used and how it is stopped to allow more rapid meeting of discharge criteria, at the same time avoiding pain or other issues.”

Castleman’s discharge time also was in the top 10, averaging less than 20 minutes. Patient teaching during the discharge phase is focused, Henderson notes. Much of the teaching is done preoperatively in the physician’s office. Patients also are scheduled to be seen in the physicians’ office the day after surgery. Thus, teaching before discharge is limited to what the patient needs to know until the postop appointment.

“We review the key points patients need to know,” Henderson says. “We try not to overwhelm them with a week or 10 days of postoperative care we know will be reviewed at the postop appointment.”

**Patient outcomes**

Few complications were reported in the study. Approximately 1.2% of cases had complications. That compares with an intraoperative complication rate of 2.7% reported by the American Society of Cataract and Refractive Surgery. The most common complication was a postcapsular tear, reported in 8 of the 1,724 cases in the study.

For more information on the study, contact the AAAHC institute at 847-853-6060. The study can be purchased at www.aaahc.org. In the menu at the top of the page, select AAAHC Institute for Quality Improvement.

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**2 ORs for 1 surgeon: How well does it work?**

A common strategy in cataract surgery is to use 2 ORs for 1 surgeon. As soon as the surgeon finishes in 1 room, he can go directly to the second room, where the next patient is ready. Most participants (47 of 71) in the AAAHC Institute for Quality Improvement study use this approach.

Whether it’s efficient depends on how the procedures are paced.

“Some are better at using 2 rooms than others,” says the institute’s director, Naomi Kuznets, PhD. “It depends on how organized your staff is and how ready you are to move back and forth.”

Some facilities can do 6 procedures per hour using 2 rooms, while others can do 5 procedures an hour with 1 room available.

Using 2 rooms per surgeon, there was a wide range in unused time per procedure—0 to 30 minutes—with an average of 9.7 minutes. Considering that turnover time for cataract cases is short anyway, that raises the question of how much efficiency ASCs gain with this arrangement.

There is an extra cost to using 2 rooms per surgeon, the study found. Centers estimated an average additional personnel cost per procedure of $78, ranging widely from zero to $800. For equipment and supplies, the average additional cost per procedure was $314, with a range of zero to $517.

On balance, says Kuznets, it’s hard to tell whether using 2 rooms allows the facility to better meet the needs of more surgeons and reduces the number of hours the center needs to be open.

“If you’re in an area with high facility and staff costs, you really have to make the most of your resources for the additional OR per surgeon to work out,” she says.
**Preventing wrong-eye surgery**

All but one of the facilities participating in the AAAHC Institute for Quality Improvement benchmarking study on cataract surgery have a procedure to prevent wrong-site surgery. But surprisingly, only 9 of the 71 surgery centers have a procedure that includes all 3 of these elements:

1. the patient signing or marking the site before surgery
2. the surgeon signing or marking the site before surgery
3. a timeout in the OR to ensure the site has been verified by the appropriate persons.

The others did not describe their policy or used 1 or 2 of the elements.

All but 4 of the participants are accredited by AAAHC, whose standards are not as prescriptive as those of the Joint Commission on Accreditation of Healthcare Organizations.

In its 2005 standards, which went into effect in March, AAAHC calls for a process to identify the procedure and site, involving the patient; have the person performing the procedure mark the site; and verify the information immediately prior to the procedure. The standards say the operating surgeon is personally responsible for ensuring that all aspects of the verification have been completed before the procedure.